



A.D. 1823 N° 4870.

S P E C I F I C A T I O N

OF

JACOB PERKINS

AND

JOHN MARTINEAU THE YOUNGER.

FURNACES.

LONDON:

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Price 6d.

1855.



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Furnaces.

PERKINS AND MARTINEAU'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, we, JACOB PERKINS, of Fleet Street, in the City of London, and JOHN MARTINEAU the younger, of the City Road, in the County of Middlesex, Engineers, send greeting.

5 **WHEREAS** His most Excellent Majesty King George the Fourth did, by His Letters Patent under the Great Seal of that part of the United Kingdom of Great Britain and Ireland called England, bearing date at Westminster, the Twentieth day of November, One thousand eight hundred and twenty-three, in the fourth year of His reign, give and grant unto us, the said Jacob Perkins
10 and John Martineau, our exors, admors, and assigns, His especial licence, full power, sole privilege and authority, that we, the said Jacob Perkins and John Martineau, our exors, admors, and assigns, during the term of years therein mentioned, should and lawfully might make, use, exercise, and vend, within England, Wales, and the Town of Berwick-upon-Tweed, our Invention of
15 “**AN IMPROVEMENT IN THE CONSTRUCTION OF THE FURNACES OF STEAM BOILERS AND OTHER VESSELS, BY WHICH FUEL IS ECONOMIZED AND THE SMOKE CONSUMED;**” in which said Letters Patent there is contained a proviso, that if we, the said Jacob Perkins and John Martineau, shall not particularly describe and ascertain the nature of our said Invention, and in what manner the same is to be
20 performed, by an instrument in writing under our hands and seals, or under

Perkins and Martineau's Improvements in Furnaces.

the hand and seal of one of us, and cause the same to be inrolled in His Majesty's High Court of Chancery within six calendar months next and immediately after the date of the said Letters Patent, that then the said Letters Patent, and all liberties and advantages whatsoever thereby granted, shall utterly cease, determine, and become void, as in and by the same, 5 relation being thereunto had, will more fully and at large appear.

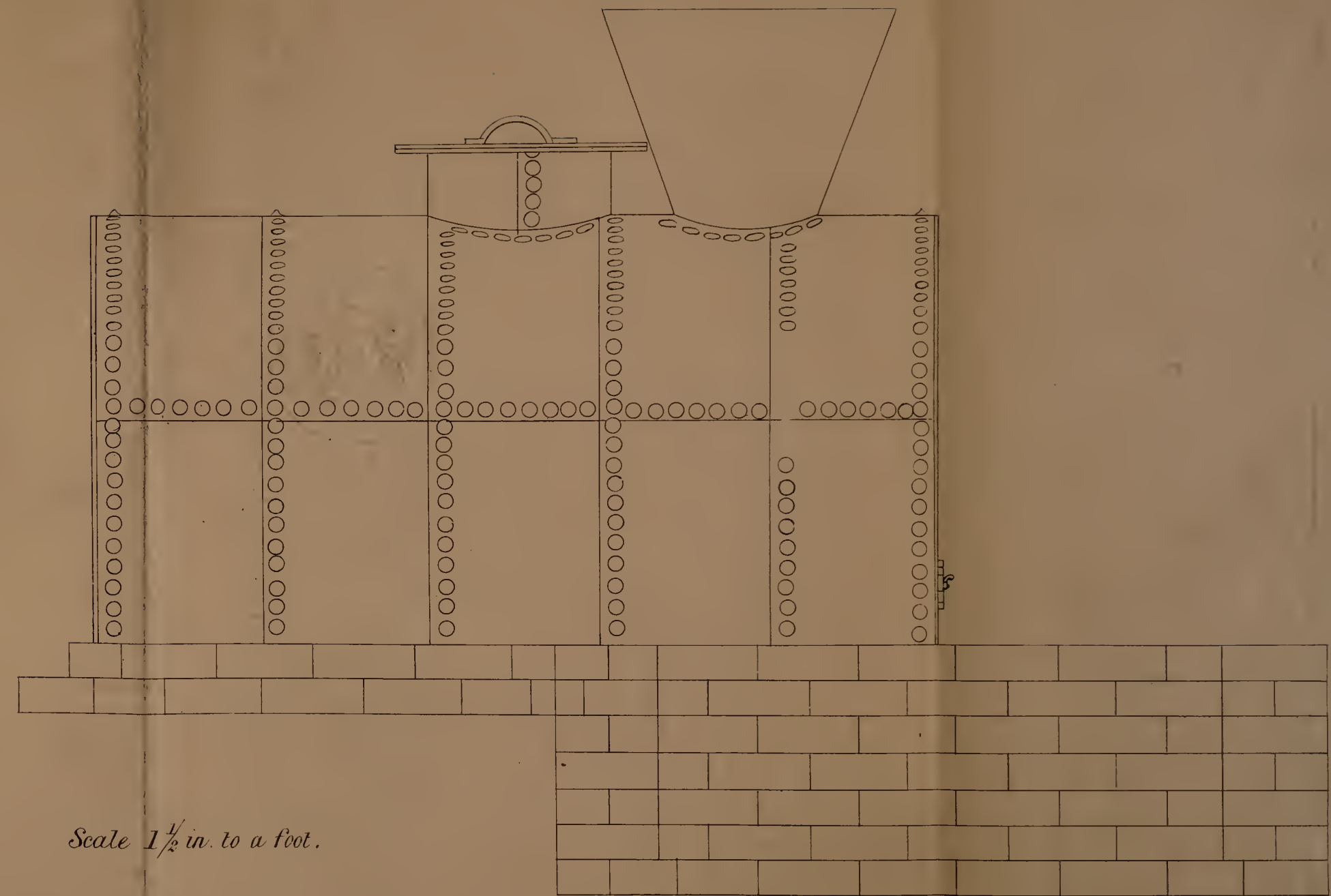
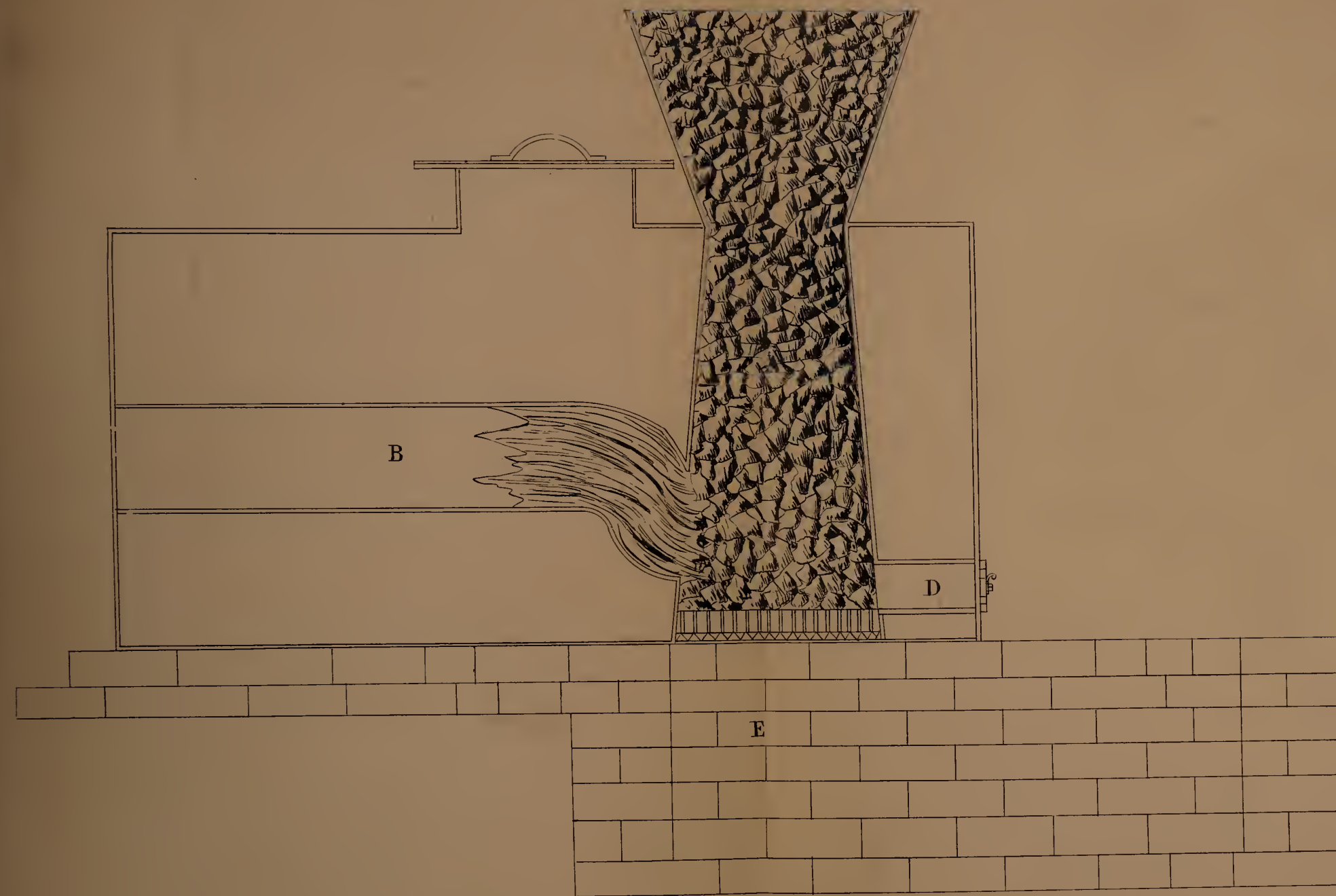
NOW KNOW YE, that in compliance with the said proviso, we, the said Jacob Perkins and John Martineau the younger, do hereby declare the nature of our said Invention to be described in the accompanying Drawing and following explanation (that is to say):— 10

We construct and place our furnace on the inside of the steam boiler, brewing copper, or other vessel, in such a manner that it is entirely surrounded by the water or other fluid to be heated, and the heat communicated by the actual contact of the burning fuel against the sides of the furnace instead of the ordinary modes, whereby the heat is principally communicated by 15 radiation.

The accompanying Drawing represents a steam engine boiler of the usual construction externally, but having one furnace adapted to it. A is the furnace with the fire-bars rising about an inch above the level of the bottom of the boiler; B, the flue leading off to the chimney; C, a hopper, into which 20 a sufficient quantity of coals may be placed to last for several hours; D, a small opening to the furnace, with a door through which the fire may be cleaned or occasionally stirred; E, the ashpit. The fire will not extend upwards above the level of the top of the flue, and as the fuel is expended a fresh quantity will fall down to supply the waste. The smoke, having to pass 25 through the burning fuel before it reaches the flue, is entirely consumed. The proportions and form of the furnace may be varied according to the size and object of the vessel to be heated, and in many cases it will be desirable to place the furnace in the centre of the vessel, and to lead off with two flues in contrary directions. In this case the opening for cleaning should be placed at the side. 30 We do not claim to ourselves the exclusive use of this particular mode of keeping the fire supplied with fuel, excepting only in conjunction with a furnace on the principle we have described.

In witness whereof, I, the said John Martineau, have hereunto set my hand and seal, the Nineteenth day of May, in the year of our 35 Lord One thousand eight hundred and twenty-four.

JOHN (L.S.) MARTINEAU, Jr.



Scale $1\frac{1}{2}$ in. to a foot.

The enrolled drawing is colored.

Drawn on Stone by Malby & Sons.

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Perkins and Martineau's Improvements in Furnaces.

AND BE IT REMEMBERED, that on the Nineteenth day of May, in the year of our Lord 1824, the aforesaid John Martineau the younger came before our said Lord the King in His Chancery, and acknowledged the Specification aforesaid, and all and every thing therein contained and
5 specified, in form above written. And also the Specification aforesaid was stamped according to the tenor of the Statute made for that purpose.

Inrolled the Nineteenth day of May, in the year of our Lord One thousand eight hundred and twenty-four.

LONDON :

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1855.

